II. Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An enucleation device comprising:

~~a proximal end;~~

~~a distal end comprising~~ a cutting cap comprising a plurality of deformable blades sized and shaped for cutting a portion of a spinal segment, the deformable blades deformable between an orthogonally-expanded cutting configuration where the deformable blades are generally splayed outward from one another and an insertion configuration where the deformable blades extend generally parallel to one another, wherein the orthogonally-expanded cutting configuration is a neutral position for the deformable blades and the insertion configuration is a deformed position for the deformable blades such that when the deformable blades are not deformed the deformable blades return to the orthogonally-expanded cutting configuration, wherein the deformable blades are positioned radially about a central opening extending through the cutting cap to allow the cutting cap to be placed over a guidewire;

a hollow flexible shaft ~~between the proximal end and~~ fixedly connected to the cutting cap, the hollow flexible shaft including an axial lumen extending along the length of the hollow flexible shaft and in communication with the central opening of the cutting cap such that the hollow flexible shaft is configured to be placed over the guidewire;~~, the flexible shaft connected to the cutting cap; and~~

a hypotube positioned around at least a proximal portion of the hollow flexible shaft and fixedly connected to a user graspable handle of the enucleation device;

a shrink tube positioned around at least a distal portion of the hollow flexible shaft adjacent to the cutting cap, the shrink tube having a reduced outer diameter relative to the hypotube such that the shrink tube provides a bearing surface between the hollow flexible shaft and the hypotube; and

a motor adapter positioned adjacent to the proximal portion of the hollow flexible shaft ~~adjacent to the proximal end~~, the motor adapter configured to connect the enucleation device to a motor drive for rotating the flexible shaft to cause rotation of the cutting cap;

where the plurality of elastically deformable blades can cut material in a space when the blades are not deformed, after accessing the space through a passage while the blades are deformed; and

where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

2-3. (Canceled)

4. (Previously Presented) A method of cutting material in a space, comprising
providing the enucleation device of claim 1;
accessing the space with the enucleation device; and
actuating the device, thereby effecting cutting of the material.

5. (Previously Presented) The method of claim 4, further comprising:
deforming the blades before actuating the device, and accessing the space through a passage while the blades are deformed;
where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

6. (Previously Presented) The method of claim 4, where the passage is curved.

7. (Previously Presented) The method of claim 4, further comprising advancing and retracting the cutting device in the space to cut additional material.

8. (Previously Presented) The method of claim 4, where accessing the space comprises advancing the cutting device over a guide wire.

9. (Previously Presented) The method of claim 4, where the material cut is selected from the group consisting of intervertebral disk and vertebral body endplate material.

10. (Previously Presented) The method of claim 4, where accessing the space comprising advancing the enucleation device through a transpedicular access passage in a vertebra.

11. (Previously Presented) A method of cutting material in a space, comprising:

providing the enucleation device of claim 1;

creating a passage to access the space;

deforming the blades to fit through the passage;

advancing the enucleation device through the passage until the cutting cap passes into the space, thereby allowing the blades to expand to their undeformed shape; and

actuating the enucleation device, thereby effecting cutting of the material;

where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

12. (Previously Presented) The method of claim 11, further comprising advancing and retracting the cutting device in the space to cut additional material.

13. (Previously Presented) The method of claim 11, where advancing the cutting device through the passage comprises advancing the cutting device over a guide wire.

14. (Previously Presented) The method of claim 11, where the passage is curved.

15. (Previously Presented) The method of claim 11, where the material cut is intervertebral disk.

16. (Previously Presented) The method of claim 11, where the material cut is vertebral body endplate material.

17. (Previously Presented) The method of claim 11, where the passage is a transpedicular access passage in a vertebra.

18. (Previously Presented) An enucleation device comprising:

a proximal end;

a distal end comprising a cutting cap sized and shaped for cutting a portion of a spinal segment, the cutting cap comprising a plurality of deformable blades comprising a shape memory alloy, wherein the deformable blades are deformable between an orthogonally-expanded cutting configuration where the deformable blades are generally splayed outward from one another about a central opening extending through the cutting cap to allow the cutting cap to be

placed over a guidewire and an insertion configuration where the deformable blades extend generally parallel to one another and parallel to a longitudinal axis of the central opening, wherein the shape memory alloy of the deformable blades is processed such that the orthogonally-expanded cutting configuration is a neutral position for the deformable blades and the insertion configuration is a deformed position for the deformable blades such that when the deformable blades are not deformed the deformable blades return to the orthogonally-expanded cutting configuration;

a hollow flexible shaft extending between the proximal end and the cutting cap, the hollow flexible shaft fixedly attached to the cutting cap and including an axial lumen extending along the length of the hollow flexible shaft in communication with the central opening of the cutting cap such that the hollow flexible shaft is configured to be placed over the guidewire; ~~and~~

a hypotube positioned around at least a proximal portion of the hollow flexible shaft and fixedly connected to a user graspable handle of the enucleation device;

a shrink tube positioned around at least a distal portion of the hollow flexible shaft adjacent to the cutting cap, the shrink tube providing a bearing surface between the hollow flexible shaft and the hypotube; and

a motor adapter positioned adjacent to the proximal end, the motor adapter configured to connect the hollow flexible shaft to a motor drive configured to rotate the shaft to cause rotation of the cutting cap;

where the plurality of deformable blades can cut material in a space when the blades are not deformed; and

where the passage has a smaller cross-sectional area than the lateral cross-sectional area of the undeformed blades while the blades are cutting the material.

19. (Previously Presented) A method of cutting material in a space, comprising

providing the enucleation device of claim 18;

accessing the space with the enucleation device; and

actuating the device, thereby effecting cutting of the material.